



ATTACHMENTS



Attachment A

**NURSING HOME SURVEY REPORT**

**Bruce Finke, MD**

# NURSING HOME SURVEY REPORT

**Bruce Finke, MD**

In March and April of 2002, the National Indian Council on Aging (NICOA) conducted a survey of nursing homes operating on Reservations or in American Indian and Alaska Native communities. The goal of the survey was to develop a current list of facilities owned or operated by Tribes, and to provide some characterizing data about them.

The nursing homes were identified using a variety of sources, including IHS and NICOA reports<sup>1,2</sup> and informal lists at the Center for Medicare and Medicaid Services (CMS). Each of these listings was assumed to be incomplete, and it is likely that the list below is also not fully complete.

## 1. What Indian Community or Tribe do you serve?

<b>Facility</b>	<b>Community or Tribe</b>
Chinle Nursing Home	Navajo/Dine
White River Health Care Center	Rosebud Sioux
Jourdain/Perpich Extended Care Facility	Red Lake Band of Chippewa Indians
Norton Sound Health Corporation	Alaska Native
Carl T. Curtis Health Education Center	Omaha Tribe of Nebraska
Laguna Rainbow Nursing Home and Elderly Care Center	Pueblo of Laguna
Blackfeet Care Center	Blackfeet Nation
Awe Kualawaache Care Center	Crow Indian Tribe/Northern Cheyenne Tribe
Choctaw Residential Center	Mississippi Band of Choctaw Indians
Gila river Indian Care Center	Gila River Tribe
Tsali Care Center	Eastern Band of Cherokee
Colville Tribal Convalescent Center	Colville Confederated Tribes of the Coville Reservation

- All but one facility listed themselves as tribally owned. The Chinle Nursing Home is owned by a Navajo non-profit organization.

## 2. How many beds do you have?

- Bed size varies from 42 to 120, with an average of 52 beds per facility.
- The median bed size is 48.5, meaning half of the facilities have fewer than 48.5 beds.

## 3. Approximately what percentage of your beds over the past year has been filled with American Indian or Alaska Native people?

- Facilities reported between 50% and 100% occupancy by American Indian or Alaska Natives.
- 7 of the 12 facilities reported 100% Native occupancy and 10/12 facilities reported 70% or higher Native bed occupancy.

## 4. Approximately what has been your occupancy rate over the past year?

- Occupancy rates ranges from 50% to 100%.
- Average occupancy rate is 64.75%.
- Median occupancy rate is 69%, meaning half of the facilities have occupancy rates below 69%

## 5. Do you receive reimbursement from:

### 5.1. Medicaid?

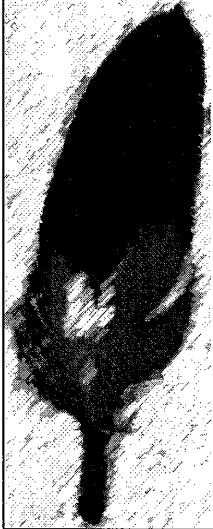
- 92% (11/12) of facilities report receiving Medicaid reimbursement.

### 5.2. Medicare?

- 58% (7/12) of facilities report receiving Medicare reimbursement
- 5.3. VA?
    - 25% (3/12) of facilities report receiving Veterans Administration reimbursement
  - 5.4. Tribal Funds?
    - 42% (5/12) of facilities report receiving reimbursement from tribal funds.
6. Do you have currently have unfilled positions
    - 6.1. Certified Nursing Asistants (N.A.s)
      - 75% (9/12) of facilities report unfilled Nursing Assistant positions.
    - 6.2. RNs, LPNs
      - 50% (6/12) of facilities report unfilled RN/LPN positions.
    - 6.3. Administrative Staff
      - 25% (3/12) of facilities report unfilled administrative positions.
  7. Have you had difficulty filling unfilled positions or retaining staff (yes/no)
    - 7.1. Certified Nursing Asistants (N.A.s)
      - 83% (10/12) of facilities report difficulty filling Nursing Assistant positions.
    - 7.2. RNs, LPNs
      - 58% (7/12) of facilities report difficulty filling RN/LPN posisitons.
    - 7.3. Administrative Staff
      - 25% (3/12) of facilities report difficulty filling administrative positions.

## **RESOURCES**

1. Indian Health Service National Resource Directory for American Indian and Alaska Native Elders. 1996.
2. John R, Baldrige D. The NICOA Report: Health and Long Term Care for Indian Elders. A Report of the National Indian Council on Aging for the National Indian Policy Center. 1996.



Attachment B

**CENSUS INFORMATION  
ON AMERICAN INDIANS AND ALASKA NATIVES:  
IMPLICATIONS FOR LONG TERM CARE**

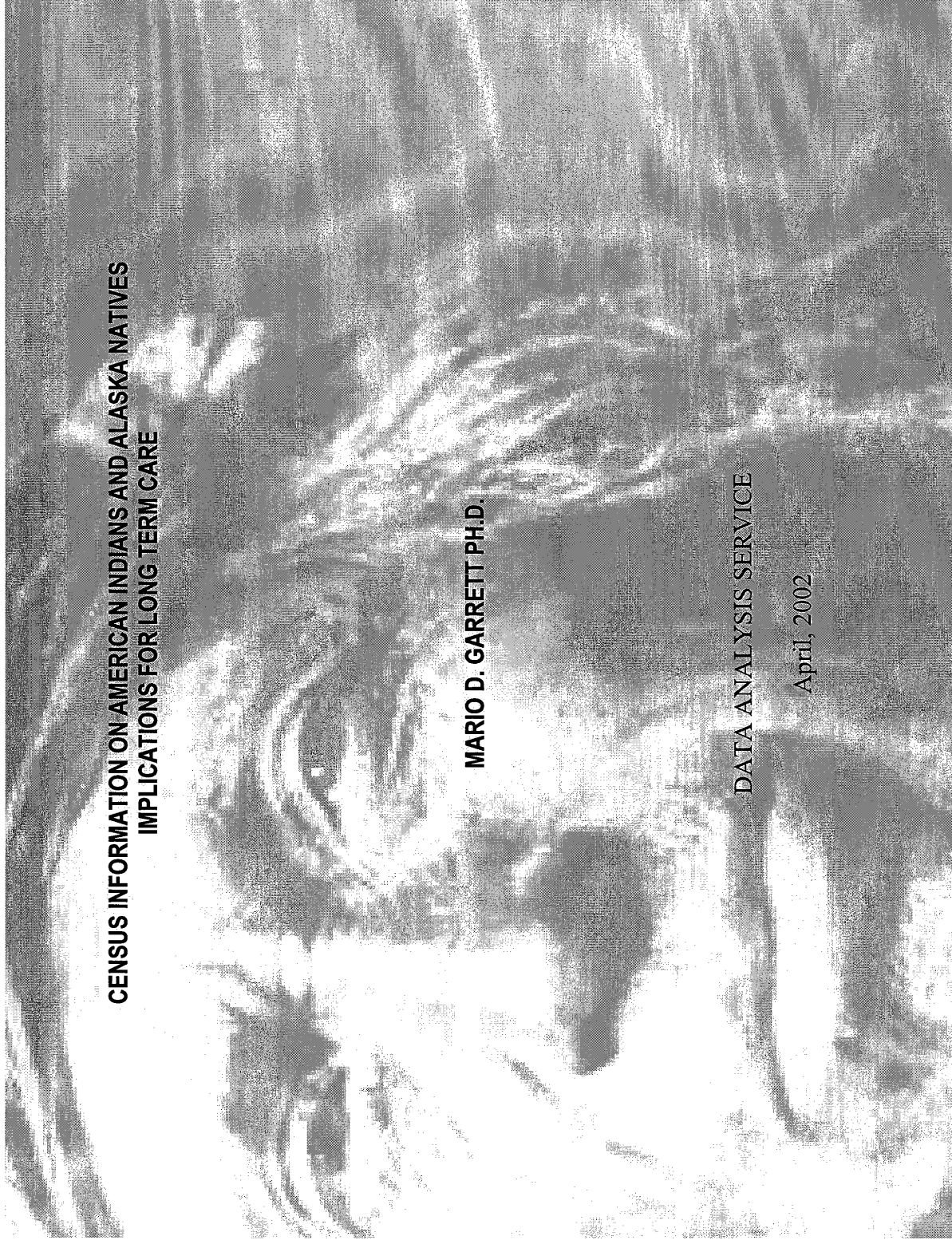
**Mario Garrett, Ph.D.**

**CENSUS INFORMATION ON AMERICAN INDIANS AND ALASKA NATIVES  
IMPLICATIONS FOR LONG TERM CARE**

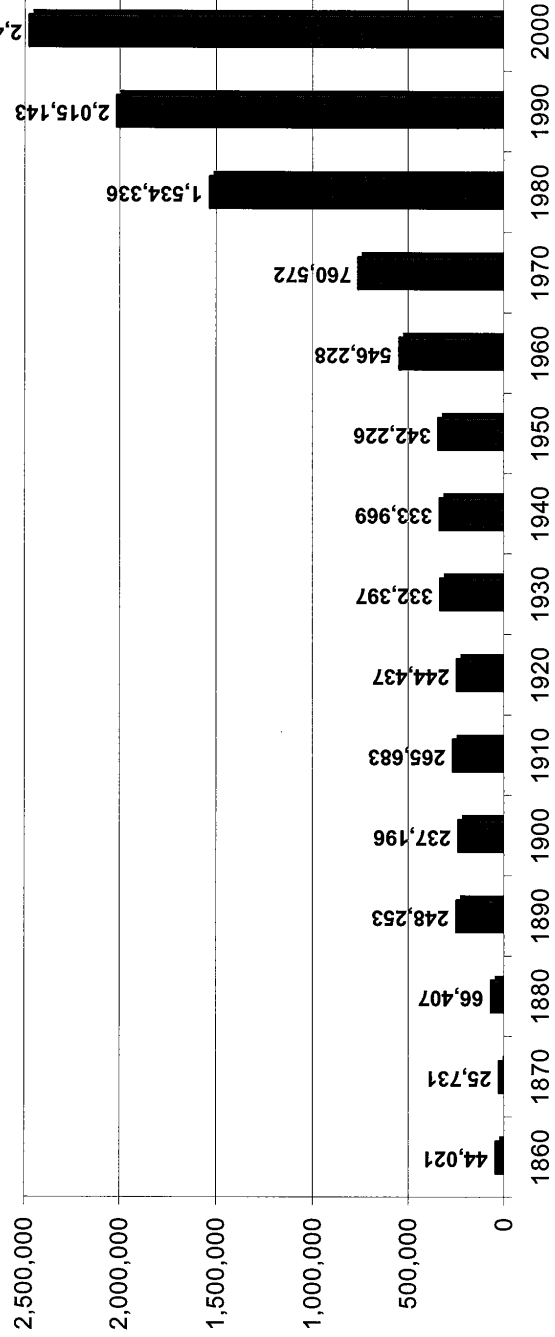
**MARIO D. GARRETT PH.D.**

**DATA ANALYSIS SERVICE**

**April, 2002**



**Total Counts of  
American Indian & Alaska Natives  
in Census Years from 1860 to 2000**



From the 1960's American Indian and Alaska Native (AI/AN) population has been steadily growing larger. Apart from one exceptionally bad period between 1860 and 1870--when the AI/AN population declined by 42 percent--the AI/AN population has been one of the fastest growing ethnic groups in America. These recent increases are not solely due to natural growth, but reflect the increased likelihood that U.S. residents identify themselves as AI/AN.

For the first time, the 2000 Census allowed respondents to select more than one race. In 1990 Census there were 2,015,143 AI/ANs, this grew to 2,475,956 in 2000 Census, with an additional 1,643,345 respondents who reported being AI/AN and of another race. Implications of this dual racial classification for Long Term Care provisions is significant because it doubles the number of potential clients, especially if tribes become involved in providing Long Term Care service for profit.

## Enumerating AI/ANs

- Censuses
- IHS/Urban
- Tribal Censuses/Roles
- SSA (CMS/M&M)
- Death Certificates

## Pros

- National
- User Pop.
- Reference
- User Po.
- National

## Cons

- Self-identification
- Clinical
- Proprietary
- Misclassification
- Misclassification

Information, at a national level, on the status of AI/ANs comes from five main sources. All these data sources have unique advantages and disadvantages. The primary barrier to full utilization of these sources is the issue of misclassification. While in Medicare eighty three percent of all AI/ANs were incorrectly classified as being of another race, in Medicaid--for the twenty two states that data was available--fifty five percent of AI/AN beneficiaries were in incorrectly classified of another race. Death certificates, collected by states, and collated by the National Center for Health Statistics is also prone to misclassification with eleven percent of all AI/AN deaths being classified of another race. Depending on who is to provide the Long Term Care services, the other three data sources (Census, IHS, and Tribal) have their own attractions. The U.S. Census information is perhaps the most detailed in providing demographic information down to block group levels.

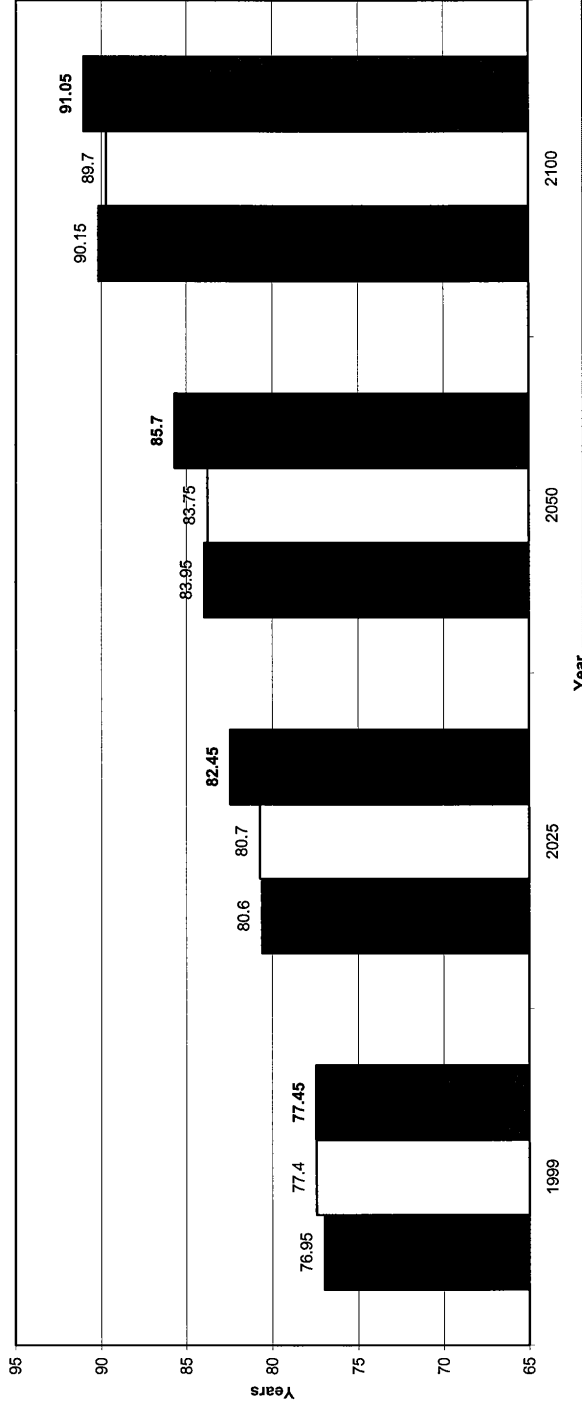


*Elderly Population in 1990 - 2000 Censuses by Ethnic Groups*

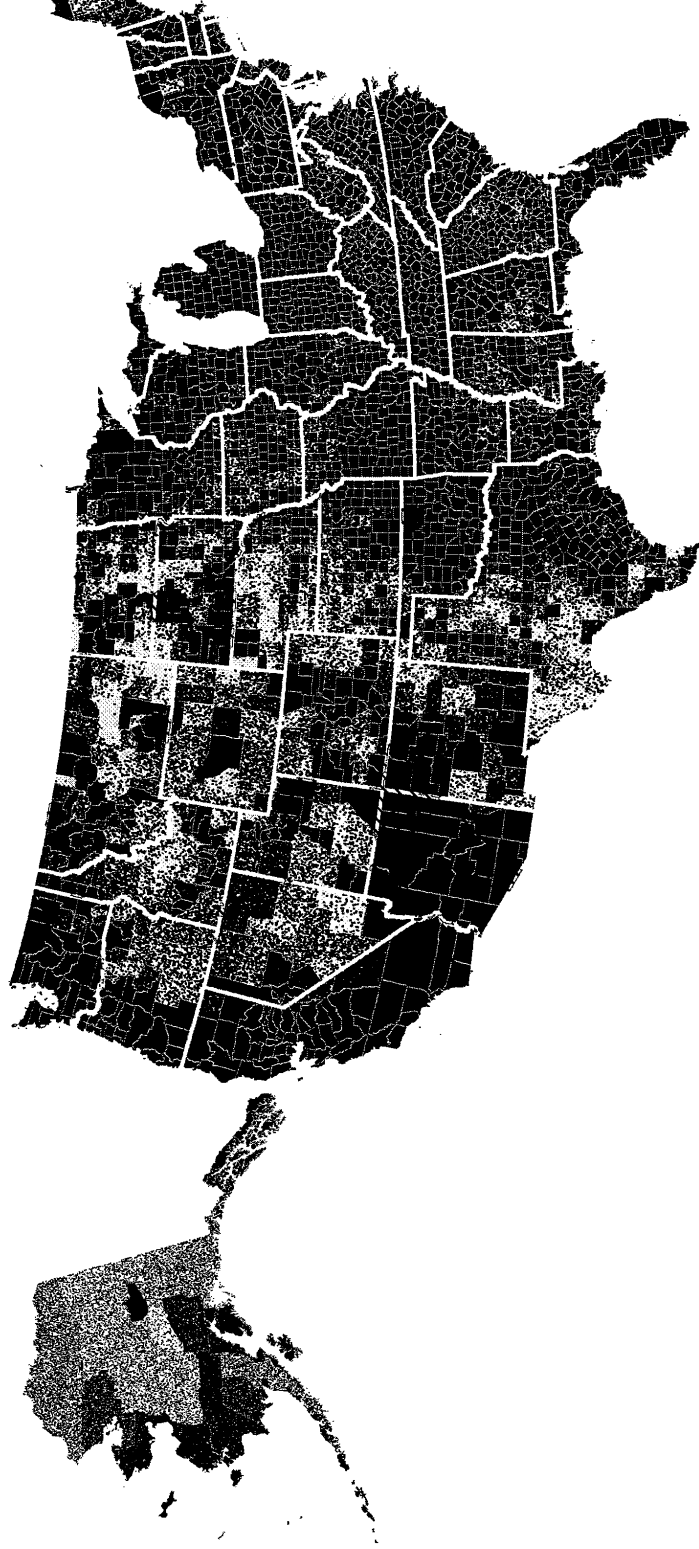
	55-64			65-74			75-84			85+			Total 0-85+		
	1990	2000	Change	1990	2000	Change	1990	2000	Change	1990	2000	Change	1990	2000	Change
AI/AN	118,990	157,720	133	74,320	85,897	116	33,859	40,254	119	9,544	12,288	129	2,015,143	2,475,956	123
White	18,144,749	20,053,089	111	16,138,327	15,688,418	97	8,971,120	10,938,616	122	2,720,625	3,778,504	139	199,827,064	211,460,626	106
Black	1,995,548	2,370,110	119	1,511,617	1,613,172	107	767,205	896,489	117	222,019	313,289	141	29,930,524	34,658,190	116
Asian	465,524	776,544	167	295,142	494,151	167	118,333	244,148	206	29,099	62,496	215	7,226,986	10,242,998	142
Hispanic	1,166,097	1,710,440	147	450,294	1,076,619	239	194,566	506,264	260	81,645	150,708	185	21,900,089	35,305,818	161
<b>Total</b>	<b>22,286,847</b>	<b>24,274,684</b>	<b>109</b>	<b>18,889,493</b>	<b>18,390,986</b>	<b>97</b>	<b>10,277,005</b>	<b>12,277,005</b>	<b>123</b>	<b>18,390,986</b>	<b>21,900,089</b>	<b>185</b>	<b>201,930,524</b>	<b>236,305,818</b>	<b>142</b>

This table shows increases in the elderly populations among ethnic/racial groups in the U.S. between the 1990 and the 2000 Censuses. Although AI/AN population growth does not compare with the immigrant groups of Asians and Hispanics, AI/AN young elderly (55-84) are increasing faster than for the White and Black U.S. Populations.

Life Expectancy From Birth:  
National Projection Program 1/13/2000

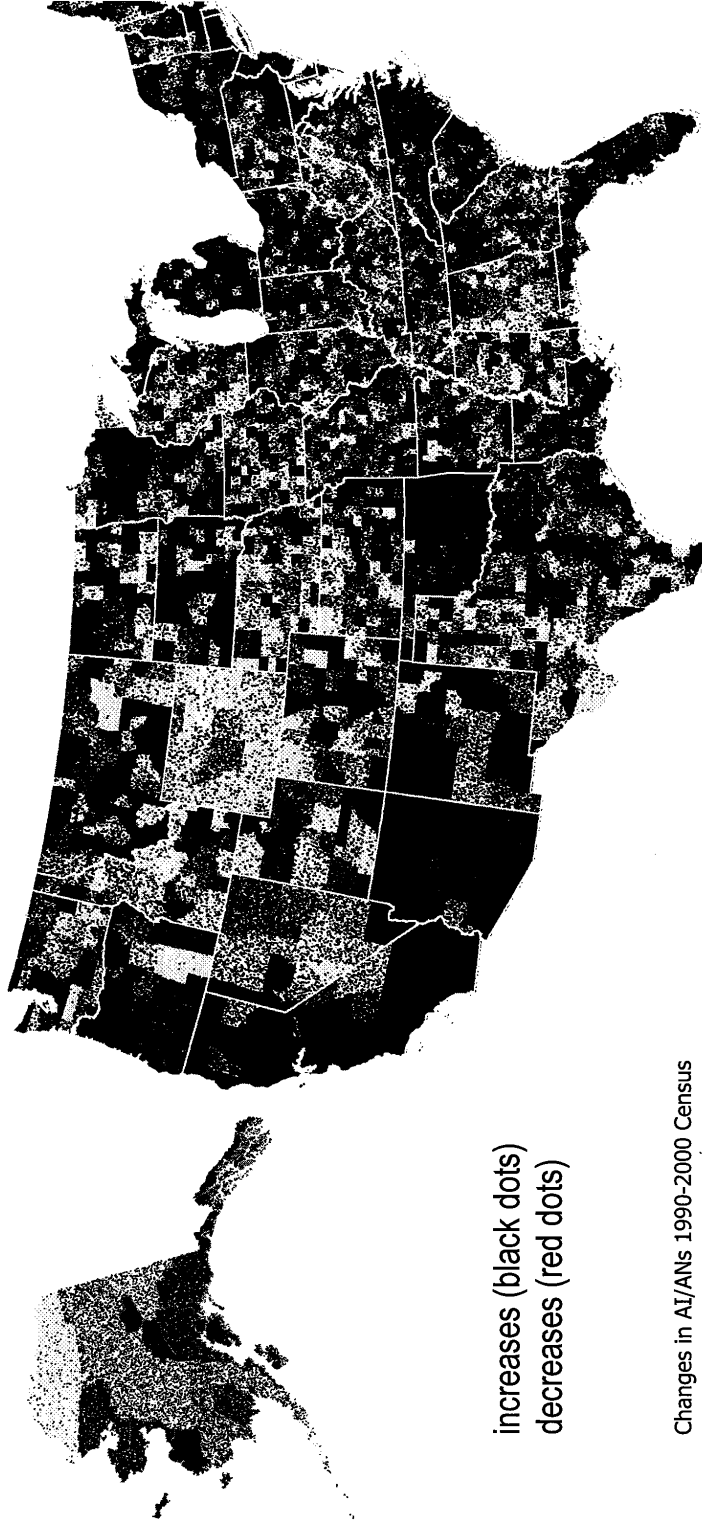


The increasing number of AI/ANs is matched by the projected increases in life expectancy. In 1999 the projected life expectancy at birth (the age reached by half the population) for AI/ANs was 77.45 years, more than for Whites (76.95) and for the U.S. general population (77.4). Although the disparity between White and AI/AN might be due to misclassification of death certificates (less AI/ANs are recorded dying), what is important in this graph is the expected increase over time. By 2025, life expectancy for AI/ANs is projected to increase to 82.45 years (more than half of the AI/AN population will attain this age). In the next quarter century Indian Long Term Care services will become a significant concern. Not only will there be more AI/ANs but they will be living longer.



### AI/ANs 2000 Census

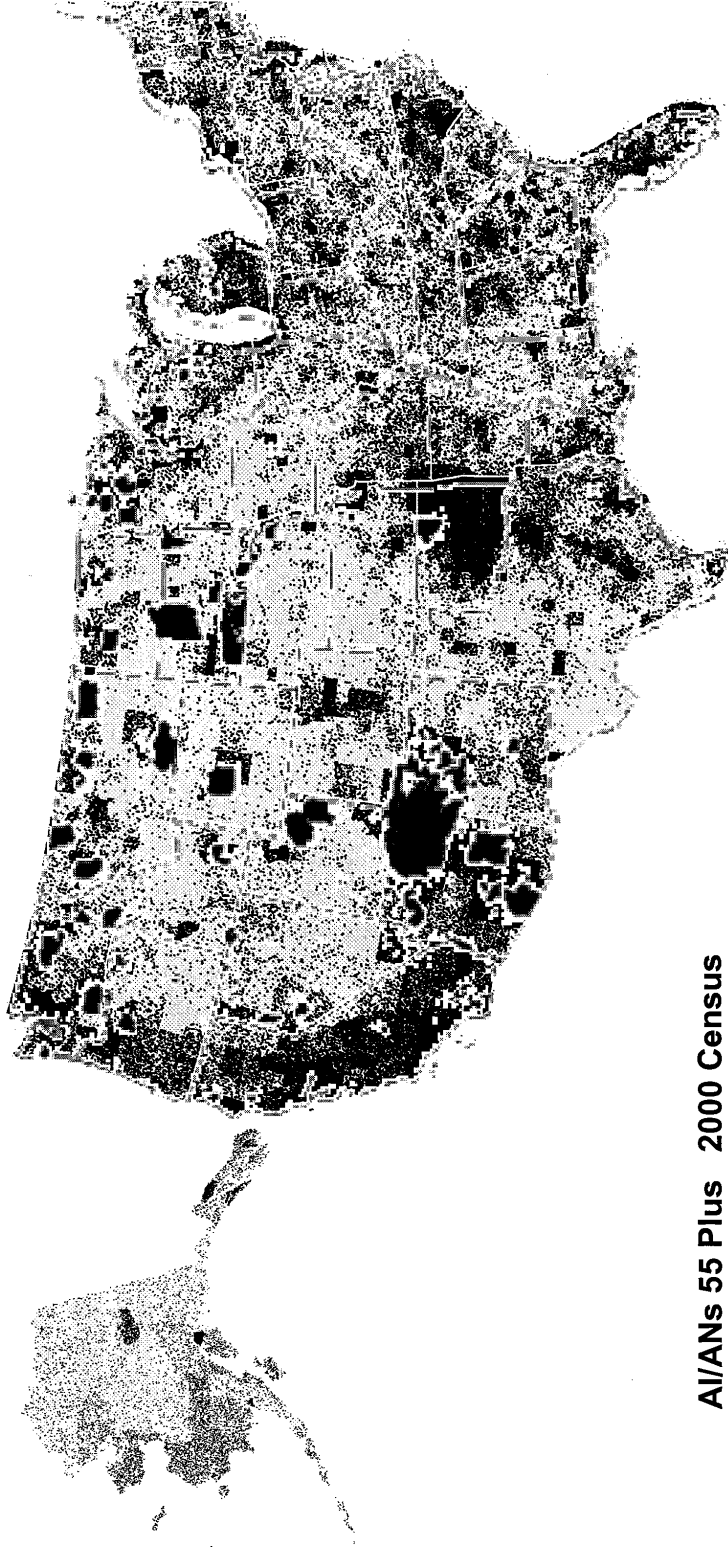
This map shows a dot density map, where each dot represents one AI/AN dispersed by county. The red shading shows where the Indian reservations are located (most Californian Rancherias Reservations and Oklahoma Indian Trusts Lands are not shown). There were only five counties that reported no AI/ANs: Hawaii's, Kalawao County; Nebraska's Hayes and McPherson Counties and Texas' Cottle and Loving Counties. The top six counties with AI/ANs are; CA, Los Angeles (CA) with 76,988 AI/ANs; Maricopa (AZ) with 56,706; McKinley (NM) with 55,892; Apache (AZ) with 53,375; Robeson (NC) 46,896 and; Navajo (AZ) with 46,532 AI/ANs. Long Term Care services for Indian elders are more likely to be needed where such dense clusters occur.



increases (black dots)  
decreases (red dots)

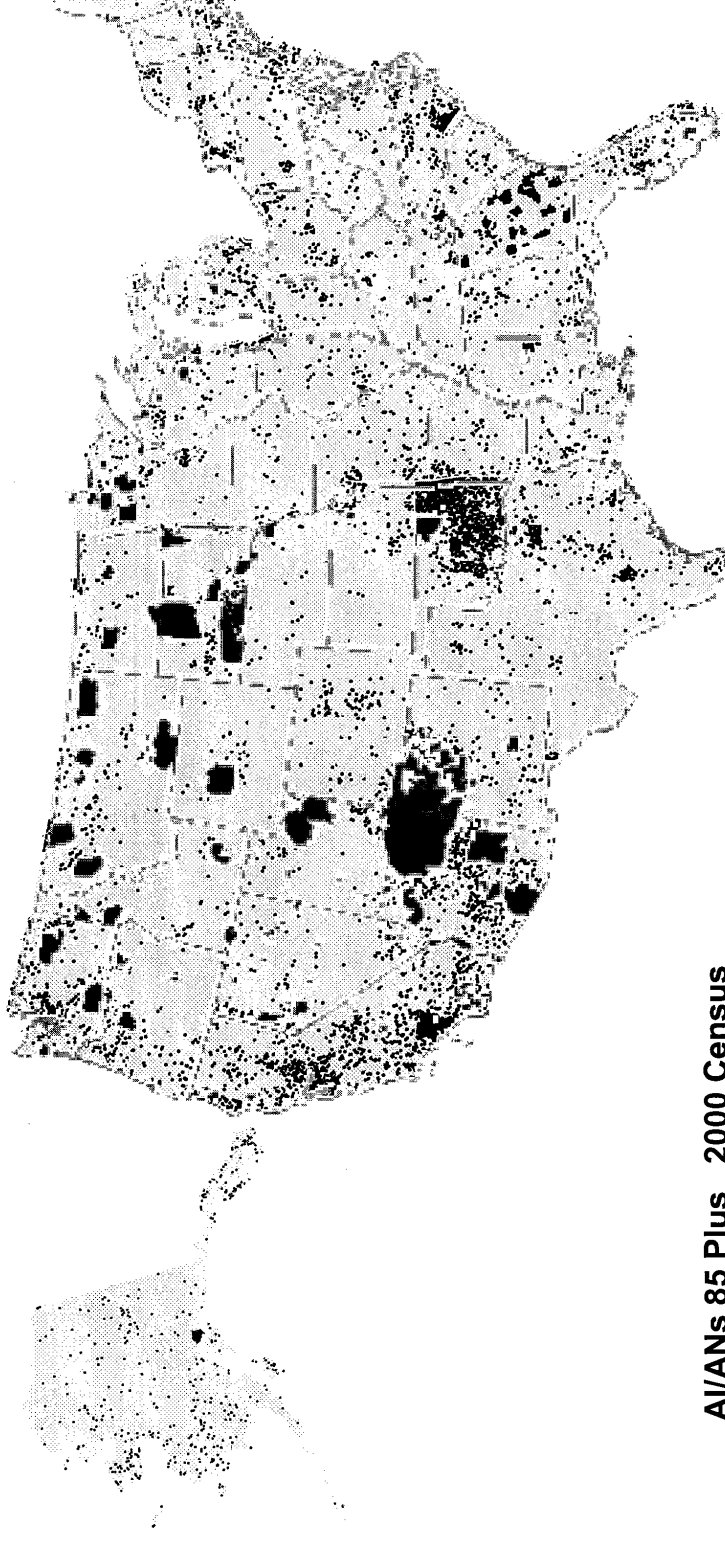
Changes in AI/ANs 1990-2000 Census

Between Censuses (1990 and 2000) AI/ANs increased by 26 percent nationally. This change did not reflect evenly across the U.S.. Some counties gained AI/ANs while others lost. This map identifies where these increases (black dots) and decreases (red dots) occurred. No general trend emerges. Neighboring counties report increases and decreases across states. In terms of planning for Long Term Care services this map shows that there is no significant migration among the AI/AN population. Today's density clusters are likely to remain for the near future.



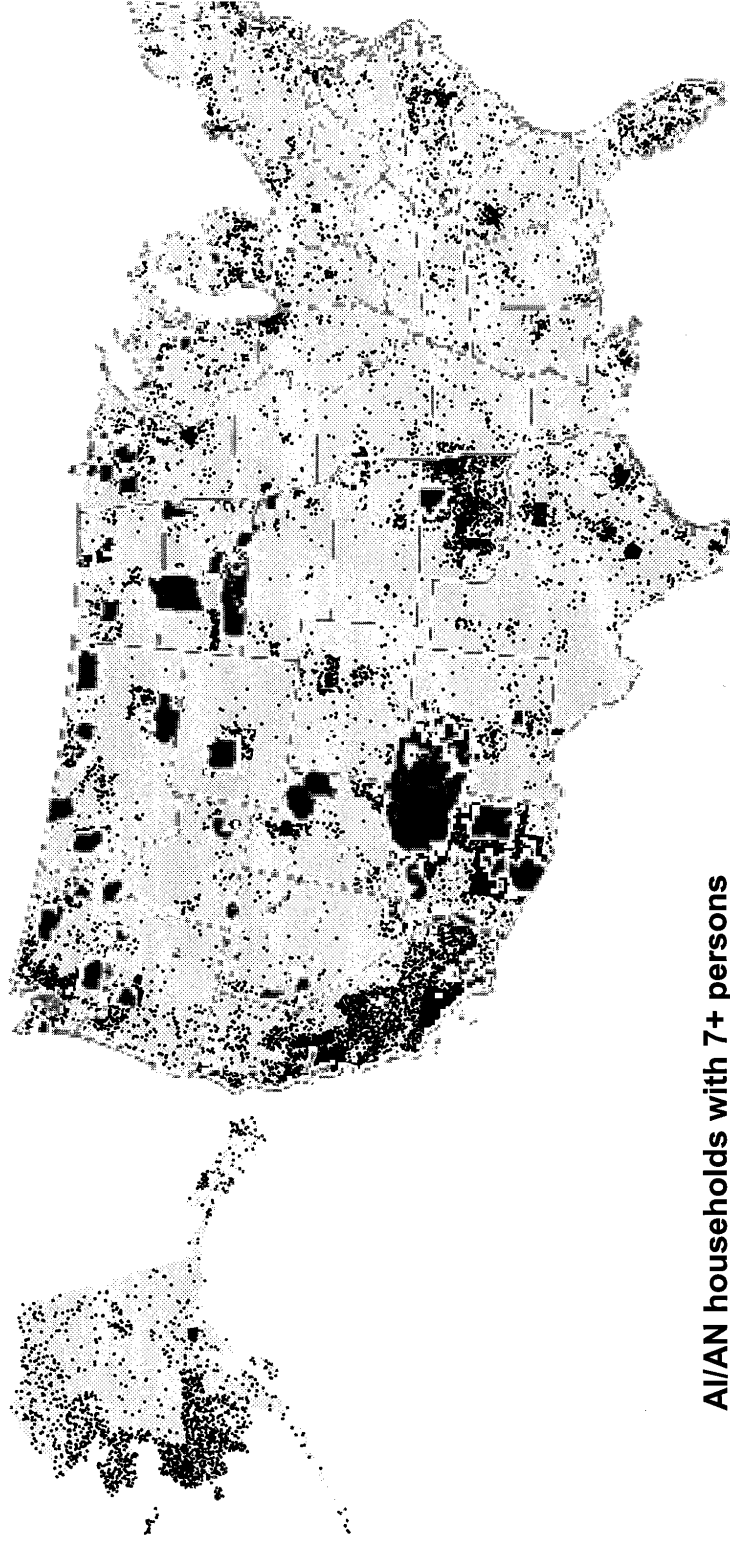
### **AI/ANs 55 Plus 2000 Census**

Older AI/ANs tend to live on or near Indian reservations, traditional lands, and in cities. This map shows the dot density map for AI/ANs 55 years and older. Although there are still a general dispersion across the U.S. the highest concentration of AI/ANs center around traditional lands and large urban regions. Long Term Care services, similar to other types of services, will need to be close to these clusters.



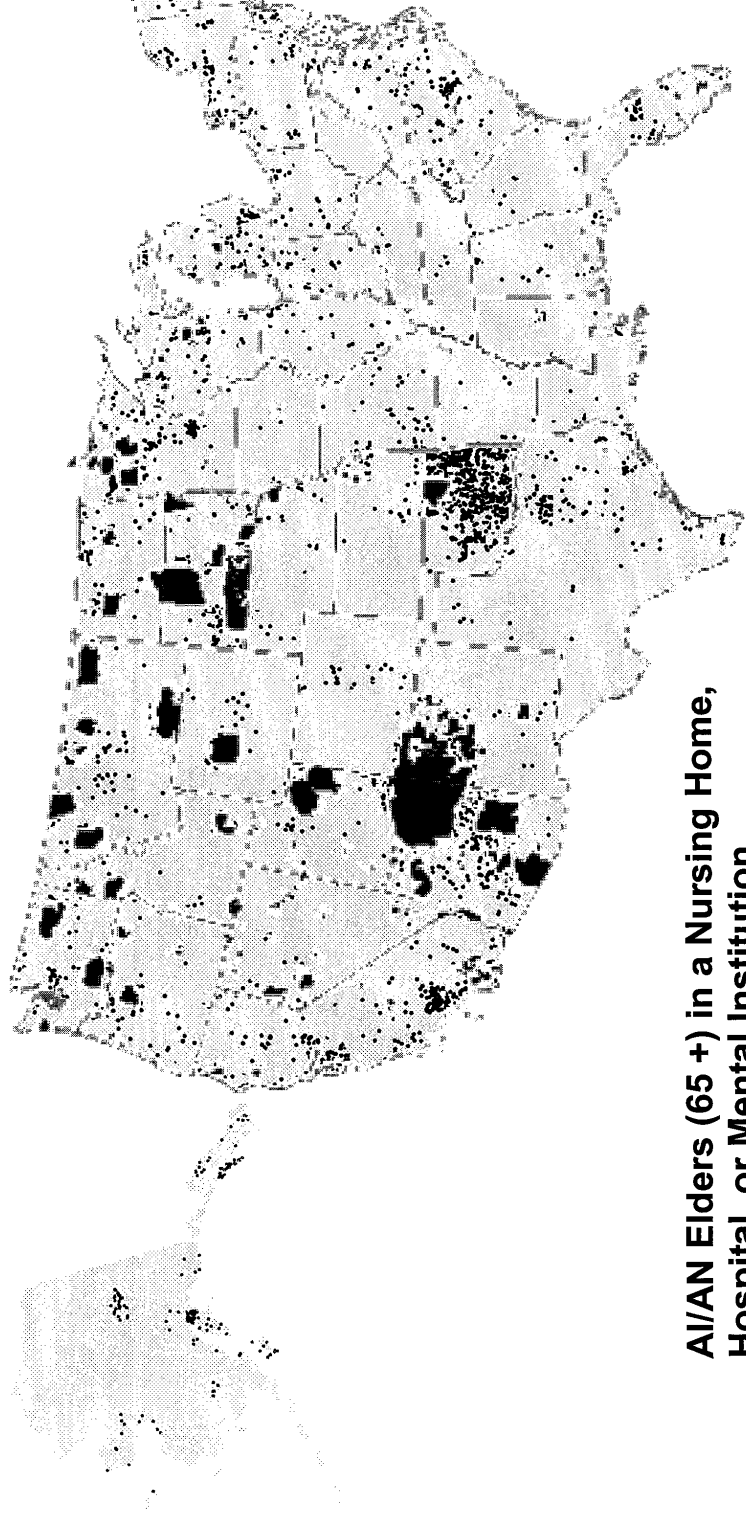
### **AI/ANs 85 Plus 2000 Census**

Again, the concentration of AI/ANs center around traditional lands becomes more evident when we map AI/ANs who are 85 years or older. It is clear from these maps that Long Term Care services need to be based on existing Indian centers both those that reflect Indian reservations and those in large metropolitan areas.



### **AI/AN households with 7+ persons**

The same concentration is also seen for traditional family households, those households with more than seven people. Large traditional households cluster on or near Indian Reservations and also in large metropolitan centers. Large households are also indicative of poverty. The large concentrations of such households in the state of California and Washington highlight the need to address the needs of urban Indians. The need for Long Term Care services are driven both by medical needs and economic capacity of populations.



### **AI/AN Elders (65 +) in a Nursing Home, Hospital, or Mental Institution**

This map portrays those AI/AN elders who report being in an institution. Although this is a broad category, elders that are identified as already needing institutional care is an extremely close proxy for local Long Term Care service needs. The pattern being reiterated here is that the need for Long Term Care services resides on or near Indian Reservations and trust lands (Oklahoma), and in large cities. The need for Long Term Care services will be exacerbated by the increase in number of AI/ANs and the rapid aging of this population. Tribes and Indian urban programs are in a prime geographic position to coordinate the development and provision of such services.





Attachment C

**ECONOMIC ANALYSIS OF LONG TERM CARE**

**Bruce Finke, MD**

# ECONOMIC ANALYSIS OF LONG TERM CARE

**Bruce Finke, MD**

*The following is a prepared response to the question:*

*What would be the overall funding (including staffing and equipment) that would be needed for the Indian Health Service to provide long term care for the elderly, in the form of Skilled Nursing Facilities and Nursing Home services.*

## **Response**

Using the data and assumptions detailed below, an estimate of the yearly cost of Skilled Nursing Facilities and Nursing Home services for the IHS user population is between **\$620,370,000** and **\$825,750,000**.

This estimate attempts to reflect the cost of staffing, equipment, care, and ongoing capital expenses, but not initial start-up costs. It is likely that it significantly underestimates the cost involved in new construction of facilities. It is based on reimbursement levels provided by states for these services, substantially lower than those provided by private payers.

The Indian Health Service does not now provide Skilled Nursing Home and Nursing Facility services and does not have an established methodology for forecasting these costs. The estimates provided here represent a “best guess” using currently available data.

## **Data and Assumptions**

Need for Skilled Nursing Home and Nursing Facility Care is determined by multiple factors, including elder’s functional limitations, availability of family support, elder’s preferences and values, and acceptability of available services. Functional status represents the most quantifiable and best-studied predictor of need for long term care services.

The largest available data set on the functional limitations of American Indian and Alaska Native elders suggests the following prevalence rates of need for help in activities of daily living (ADLs: bathing, dressing, eating, getting in or out of bed, walking, and using the toilet).<sup>1</sup>

<b>Functional Limitations</b>	<b>Age 55-64</b>	<b>Age 65 and older</b>
Moderate (limitations in one activity of daily living or two instrumental activities of daily living)	18%	23.4%
Moderately Severe (limitations in 2 activities of daily living)	6.6%	7.4%
Severe (limitations in 3 or more activities of daily living)	10.7%	14.7%

Data from a earlier, smaller sample of this population, suggests that 9.6% of AI/AN elders 55 years and older had 4 or more ADL limitations.<sup>2</sup> Data on functional limitations among nursing home residents in 1997 indicates that the mean number of ADLS with which nursing home residents needed help was 4.4%.<sup>3</sup>

Using the most recent IHS User Population data with age breakdowns available (1997)<sup>4</sup>, we can estimate the number of IHS beneficiaries with the following functional limitations:

Functional Limitation	Age 55-64	Age 65 and older	Total age 55 and older
Moderate (limitations in one activity of daily living or two instrumental activities of daily living)	12,417	17,461	29,878
Moderately Severe (limitations in 2 activities of daily living)	4,553	5,522	10,075
Severe (limitations in 3 or more activities of daily living)	7,381	10,969	18,350

Functional Limitation	Age 55 and older
Limitations in 4 or more ADLS (9.6%)	13,786

The cost of care varies across a range determined by regional costs and intensity of care, but a reasonable figure derived from reimbursement schedules of several states for is **\$45,000** per year<sup>5</sup> per client. This figure reflects the cost of staffing, equipment, care, and ongoing capital expenses, but not initial start-up costs.

Using the data and assumptions detailed below, the yearly cost of Skilled Nursing Facilities and Nursing Home services for the IHS user population can be conservatively estimated to be between **\$620,370,000** and **\$825,750,000**. The lower estimate is based on the cost of services for only those elders whose functional limitations (4 or more ADLs) most closely match those of current nursing home residents in a national sample. The higher estimate is based on the cost of services for all elders who meet nursing home eligibility standards under most state Medicaid programs (3 or more ADL limitations).

This estimate attempts to reflect the cost of staffing, equipment, care, and ongoing capital expenses, but not initial start-up costs. It is likely that it significantly underestimates the cost involved in new construction of facilities.<sup>6</sup> It is based on reimbursement levels provided by states for these services, substantially lower than those provided by private payers.<sup>5</sup>

## NOTES AND REFERENCES

1. The National Resource Center on Native American Aging at the University of North Dakota Center for Rural Health. The data were derived from the "Identifying Our Needs: A Survey of Elders" - a needs assessment project being conducted by tribes across the nation. The data file contain 8,560 respondents representing 83 tribes.
2. Activity Limitations Among Native American Elders. Report 01-2 of the National Resource Center on Native American Aging at the University of North Dakota Center for Rural Health. October, 2001.
3. Sahyoun NR et al. The Changing Profile of Nursing Home Residents: 1985-1997. Trends in Health and Aging. Aging Trends No.4. March 2001. Centers for Disease Control and Prevention. National Center for Health Statistics.
4. 1997 Indian Health Service User Population. Indian Health Service Program Statistics Team. Contact: Edna Paisano, Principle Statistician, Program Statistics Team.
5. Data from the states of Washington, North Dakota, and New Mexico. For comparison, the AARP published national private pay average costs for nursing home care at \$4,654 per month or \$55,848 per year.
6. The cost of new nursing home construction in North Dakota averages \$120,000 per bed when there is a mix of single and double rooms. This would place the cost of a 60 bed unit at \$7.2 million. Personal conversation, Muriel Peterson, North Dakota Department of Human Services.

## Further Discussion

“Long-term care is a set of health, personal care, and social services delivered over a sustained period of time to persons who have lost or never acquired some degree of functional capacity.”(Kane and Kane)<sup>7</sup>

The long term care needs of American Indian and Alaska Native elders must be met by an array of resources which provide needed services in the least restrictive setting possible in a manner consistent with the elder’s wishes and cultural values.

While nursing homes are one element of a long term care system, they are the most restrictive and most expensive setting. In addition, the small population size and dispersed pattern of AI/AN elders makes nursing home construction and management (where economics of scale dictate larger bed capacity) less economically feasible.<sup>8</sup> Finally, the removal of an elder from the home and family setting is often unacceptable and undesirable to the elder and the family. It has the potential, by removing the elder from daily interaction with the extended family, to disrupt the cultural continuity of the family and community.

Alternatives to nursing homes have taken an increasing role nationally and in AI/AN communities. Particularly promising are home and community based models that focus on the cost effective provision of services in the least restrictive setting. Services include personal care and homemaker services, meal preparation, housing modification, case management, caregiver respite and caregiver training. Settings range from the elder’s own home to small and medium sized (6-30 units) home settings for elders and the disabled in which needed personal care services can be delivered.

The data presented in the above discussion can be used to estimate the costs of provision of home and community based care to the entire population of AI/AN elders with functional limitations.

Functional Limitation	Age 55-64	Age 65 and older	Total age 55 and older
Moderate (limitations in one activity of daily living or two instrumental activities of daily living)	12,417	17,461	29,878
Moderately Severe (limitations in 2 activities of daily living)	4,553	5,522	10,075
Severe (limitations in 3 or more activities of daily living)	7,381	10,969	18,350

Cost of care assumptions can be derived from the North Dakota Department of Human Services average expenditure data for individuals with similar levels of functional limitation. We can use these cost of care assumptions to estimate the total long term care costs for the IHS user population if all eligible individuals received services.

Functional Limitation	Average expenditure per client per year in North Dakota <sup>9</sup>	Projected costs AI/AN 55 and older
Moderate (limitations in one activity of daily living or two instrumental activities of daily living)	\$4,632	\$138,394,896
Moderately Severe (limitations in 2 activities of daily living)	\$4,992	\$50,294,400
Severe (limitations in 3 or more activities of daily living)	\$10,254	\$188,160,900

The total cost of care for home and community based services for IHS served elders with moderate, moderately severe and severe functional limitation using these estimates would be **\$370,850,196**. This

compares quite favorably to the estimated cost for skilled nursing home and nursing facility care derived above from the same set of assumptions.

These cost of care assumptions do not include housing. Some elders will not be able to be cared for in their own home and will need housing as a part of the long term care package. Housing costs can be estimated by using the State of Washington average reimbursement level of \$22,000 per year for housing in small and medium sized homes (up to 30 beds) under the Medicaid waiver program.<sup>10</sup> Although we do not have data indicating the need among AI/AN elders for housing as a component of long term care, we can make an assumption for the purposes of this discussion. If we assume that 10% of the 58,303 AI/AN elders with functional limitations require housing as an element of long term care, we can add an additional \$128,266,600 to the cost estimate.

This would bring a total cost of care to **\$499,116,796**.

These cost estimates suggest that all eligible AI/AN elders with functional limitations could be served in the community at substantially less cost than would be required to serve only the neediest 25% in nursing homes.

## **ADDITIONAL REFERENCES AND NOTES**

7. R. A. Kane & R. L. Kane. Long-term care: Principles, programs, and policies. New York, NY: Springer, 1987.
8. Trends in Nursing Home Size. National Nursing Home Survey. Centers for Disease Control and Prevention. National Center for Health Statistics.  
[http://www.cdc.gov/nchs/about/major/nhhd/nhs\\_chart.htm](http://www.cdc.gov/nchs/about/major/nhhd/nhs_chart.htm)
9. Personal communication, Muriel Peterson. North Dakota Department of Human Services.
10. Personal communication, Shelly Zylstra, Washington State NWAAA.



Attachment D

**FUNCTIONAL LIMITATIONS AND THE FUTURE  
FOR LONG TERM CARE**

National Resource Center on Native American Aging at the  
University of North Dakota





## Functional Limitations and the Future Needs for Long Term Care

National Resource Center on Native American Aging  
at the University of North Dakota

In this analysis we examine functional limitations among Native American elders using data collected across the nation in the program for conducting local needs assessments entitled "Identifying Our Needs: A Survey of Elders". The data were collected by tribes participating in the needs assessment activity conducted by the National Resource Center on Native American Aging (NRCNAA) with funding provided by a cooperative agreement with the Administration on Aging (AoA). An aggregate data file containing the results from participating tribes now contains data from 83 tribal needs assessments with a total of 8,560 respondents. Although more tribes are collecting data for their needs assessments, the size of the aggregate file is now quite large and analysis is now appropriate. We believe at this point the data provides an accurate picture of the status of the nation's Native American elders.

In this assessment project, tribes from the nation have been invited to use a standardized survey instrument and data collection procedures to conduct local needs assessments that provide each tribe with an accurate picture of the status of their local elders with respect to health status and their need for services. As each tribe completes this process, they are provided statistical results for their local area and are added to the total "aggregate" file that will represent the overview of all Native American elders. This analysis examines the aggregate file.

Functional limitations reflect the level of disability in the population and relate to criteria normally used for admission to nursing homes, assisted living and to community based long term care programs. Definitions of functional disability vary considerably, but nearly all use information about "activities of daily living" (ADLs) or "instrumental activities of daily living" (IADLs). ADLs include difficulties with eating, walking, using the toilet, dressing, bathing and getting in and out of bed. These are considered fundamental to survival. IADLs reflect activities required for independent living, but are less severe than ADLs. IADLs include cooking, shopping, managing money, using a phone, doing light or heavy housework and getting outside the home.

People normally experience needs with IADLs in advance of ADL limitations and the ADL limitations tend to evolve in a pattern with bathing one's self commonly being the first and most frequent ADL for which assistance is needed. Eating and toileting are the least frequently identified ADLs among the non-institutional elderly (Sahyoun, Pratt, Lentzner, Dey, & Robinson, 2001).

### **A Classification of Functional Limitations**

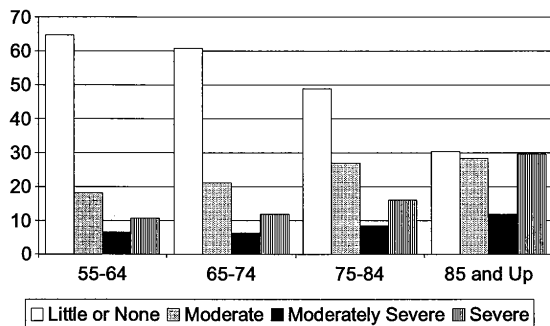
In this report, we combine ADLs and IADLs into a classification that places people into one of four levels of need and that corresponds to different levels of care. This model was developed employing an approach found in a report prepared by Kunkel and Applebaum (1991) for the U.S. Department of Human Services.

**Functional Limitation Categories**

Functional Limitation Categories	ADL's	IADL's
Little or None	0	1 or less
Moderate	0 1	2 or more 0
Moderately Severe	2	0
Severe	3	0

The lowest level, Little or None, requires no long term care services and represents those who have retained vitality. The Moderate category reflects a beginning level of long term care need and would most appropriately be met with home and community based care and/or personal care services. Moderately Severe functional limitations serve as the threshold for assisted living and Severe functional limitations serve as the basis for admission into skilled nursing care. Using these categories, we are able to estimate the numbers of people at these different levels of need and who would be appropriate candidates for different levels of long term care services.

**Figure 1. Functional Limitation Rates by Age: Native American Elders 2000**

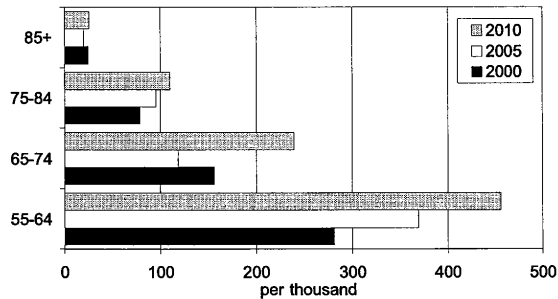


The rates for functional limitations among Native American Elders are presented in Figure 1. Note how the proportion of the population free from functional limitations drops with age. As the population ages, there will be an increased need to provide long term care services.

The numbers of people classified as elders in the Native American population is about to explode with the arrival of those born during the baby boom.

Figure 2 illustrates the dramatic growth expected for Native American elders. These projections are based on current life expectancies and constitute conservative estimates of the future growth of elders. Life expectancy for Native American elders has been growing rapidly and should be expected to grow in the future.

**Figure 2. Population Changes by Age: 2000 to 2010**



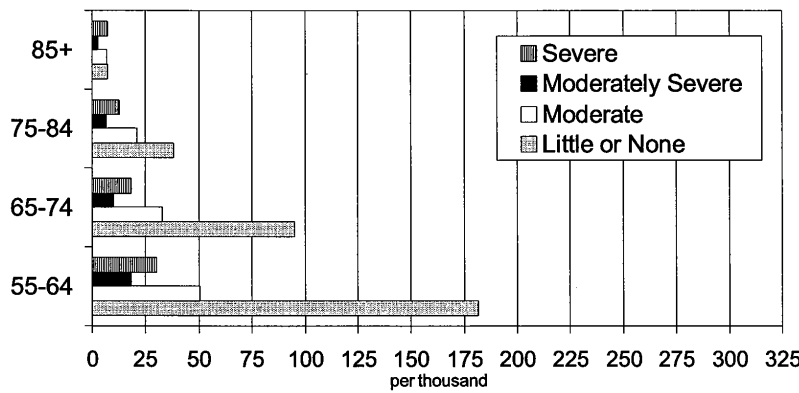
It is important to note that the "young old" will be the first to exhibit substantial growth and as each year passes, the growth will shift to older ages. Functional limitations relate to age, with the older age groups having the highest levels of limitation, or the greatest need for higher levels of care.

**How will functional limitations change in the future?**

When one combines the population data with the measure of functional limitation, a picture of the growth in need for long term care is generated. This is presented in Figure 3. In the year 2000, applying the prevalence rates for the three levels of functional limitations, a total of 217,922 Native American elders would have had a level of limitation appropriate for long term care services.

and is based on projections using Indian life tables to estimate how long people could be expected to live. If current rates of disability continue while the population of elders grows, 328,927 people with functional limitations of moderate or more severe levels can be expected by 2010. A combination of large numbers of people becoming elders and early ages of onset for many chronic diseases that produce functional limitations creates a growth in functional limitations of 51% in just one decade.

**Figure 3. Population with Functional Limitations by Age: 2000**



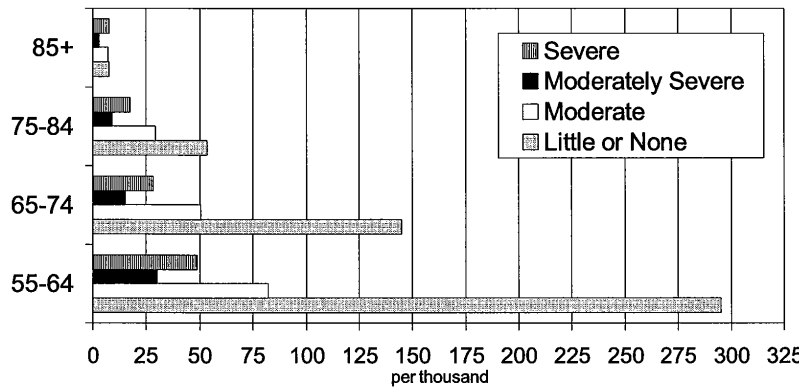
As the population ages, the number of elders with functional limitations will grow, assuming the same rates of disability are continued. Figure 4 demonstrates the impact of a decade of growth and change in the population

promoting their own health. In addition to this, there is evidence that access to modern medicine can make a significant difference as well. New medications that control arthritis and joint replacement surgery are becoming much more

**What can be done to reduce the level of functional limitations?**

The health and vitality of future elders depends on healthy lifestyles - good diets, regular exercise and refraining from drinking and smoking. If people take care of themselves, they can reduce the need for long term care services by promoting their own health. In addition to this, there is evidence that access to modern medicine can make a significant difference as well. New medications that control arthritis and joint replacement surgery are becoming much more common and both serve to enable people to remain more vital. Figure 5 suggests the possible impact of this kind of improvement. An overall reduction of 16,919 people with functional limitations can be achieved with a 10% reduction in limitation. It is also important to note that a reduction in limitation would also produce a

**Figure 4. Population with Functional Limitations by Age: 2010**

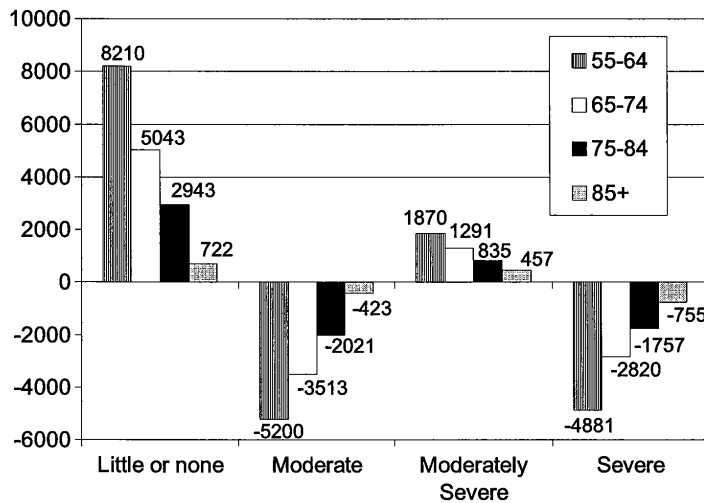


lessening of severity in addition to reducing the overall number of persons with limitations. Ten percent of those who would have become severe would be maintained at the moderate level and would not move into the severe category. Similarly, ten percent of those expected to become moderately severe would be maintained at the moderate level of severity rather than progressing to severe. Lastly, 10% of those who would have become moderately limited would be kept at a sub-threshold level with little or no limitation. The net result of this “stepped down” functional limitation is that both the total numbers classified as limited and in need of assistance and the amount of help required at the higher levels of assistance would be reduced. This would be a good investment!

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**Figure 5. Functional Limitations 2010 with 10% Stepped Down Reduction**



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